

PILGRIM STATION

# **Tritium source accidentally discovered**



# Critics say 'I told you so,' NRC says 'good news' [

By Frank Mand

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PLYMOUTH – Plymouth native and Entergy critic Meg Sheehan put it this way: "If this was a leaking pipe at a gas station, the authorities would be all over them, issuing fines, threatening to shut them down. But this is a nuclear plant, so it's no big problem."

A frustrated Sheehan, reached just after conferring with town officials, was responding to the news that an underground discharge line at the Pilgrim Nuclear Power Plant – technically referred to as a "neutralizing sump pump discharge line" – had sprung a leak.

Sheehan and many others, notably Pilgrim Watch's Mary Lampert and the Union of Concerned Scientists, have for years been pressuring state and federal officials to take a harder, closer look at the condition of the network of underground pipes at Pilgrim.

Pilgrim Watch, officially interceding during the relicensing process, contended that the aging management program for buried pipes and tanks carrying radioactive liquids was not sufficiently stringent for Pilgrim because, in part, that infrastructure had been buried many years ago in a very corrosive environment.

Previous to that, the UCS officially petitioned the NRC to require that license renewal applications have to consider aging effects on any piping used to handle radioactive liquids or gases.

The NRC denied those petitions, the UCS' David Lochbaum said, suggesting that the degradation of pipes would be minimal because of the low pressure and temperatures under which these pipes operate.

Since that time, though, Lochbaum said, there have been several instances of contaminated water leaking from nuclear plants all around the country.

Six and a half million gallons of radioactively contaminated water leaked from the facility in Braidwood, Ill. Vermont Yankee discovered a "two-fer" Lochbaum said, with radioactive liquid leaking from a pipe meant to handle radioactive gases. And now Pilgrim?

In its initial, required announcement, Entergy's official response offers what appears to be a positive spin on this "discovery."

The regulatory-required notice of the discovery of the problem at Pilgrim suggested that there was in fact, no leak, but rather, a discovery of "indications of a separation in the line."

"At 1314 hours on Wednesday, April 10, 2013, during a boroscopic inspection of the sub-surface portions of the Neutralizing Sump Discharge Line, Pilgrim Station discovered indications of a separation in the line. The line is currently isolated," Pilgrim's notice read, "and no discharges were in progress during the planned inspection."

That language suggests, at least to those without specialized training or additional information, that the plant's proactive inspection approach may have

helped to avert the discharge of contaminated water into the sole-source aquifer that Pilgrim sits atop.

But information provided by the NRC painted a very different picture.

"About a week ago, the neutralizing sump was being discharged when water was seen leaking from a reactor building electrical junction box," NRC spokesman Neil Sheehan said.

So, contaminated water gushing from a junction box – not evidence discovered by a proactive inspection of the line – was the first indication of a problem.

The so-called planned "boroscopic inspection of the sub-surface portions of the Neutralizing Sump Discharge Line" came after the water came gushing out.

Furthermore, the NRC revealed, before its inspection of the line Entergy had analyzed the water coming out of the electrical junction box and determined that it had the same level of tritium as the neutralized water being discharged at the time.

The same level of tritium concentration?

For a decade, the plant has been searching, using a variety of techniques and specialized equipment, for the source of tritium found in test wells around the plant.

Now it has found a source (not necessarily the source or all sources) of tritium-contaminated water leaking from a line, into and/or onto the ground.

This could be big news but, depending on who you speak with, it's not clear if it's good news or bad news.

The NRC, at least at this early stage, sees the positive potential.

"The company is now continuing with its review of the line break," Neil Sheehan said. "One theory being checked is whether this break in the line could be responsible for tritium groundwater contamination first identified at the plant several years ago. Since then, the company has been searching for the source of this contamination without success. Obviously, it would be a positive development for the source of the tritium contamination to be found and halted."

The discharge was halted, at the time, and the line isolated (removed from service).

Entergy insists that everything that has been done, in terms of pipe inspections and information released on the broken pipe, has been in accordance with state and federal regulations.

Pilgrim Spokesman Carol Wightman issued a statement Friday morning noting that the NRC has evaluated its inspection processes and approved them.

"The NRC performed a detailed, technical inspection of our underground piping inspection program as part of our license renewal application process," Wightman said, "and found our program to be in compliance with NRC regulations."

"Our comprehensive underground piping inspection program is also subject to ongoing NRC review," she added. "The subject pipe is part of the underground piping inspection program and was scheduled for inspection this spring."



The February scheduled inspection would have been the first time this line was inspected under the plant's required buried piping inspection program. This inspection will now be completed in May.

But questions remain.

What other leaks might there be on the plants grounds? How long had this particular line been leaking?

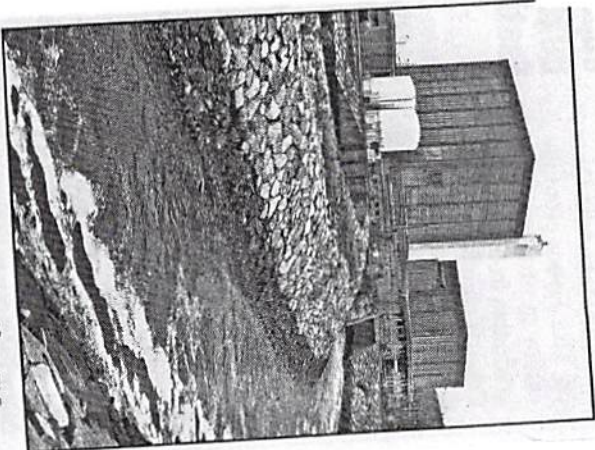
Critics of the plant have been trying to convince state officials that this kind of leak was a likely source for the presence of tritium for years, and said they are concerned that neither the state nor the NRC has taken this issue seriously.

Will this recent discovery reopen debate on the need for more stringent inspections and/or replacement of the vast number of underground piping and wiring at the 40-year-old plant?

Note that this "break in the line" was announced just days before the plant attempted to shut down for its biennial refueling and maintenance process but instead had to manually scram the reactor because pressure levels unexpectedly began to drop.

And if this were not enough bad publicity for the plant in one week, Thursday, Pilgrim officials admitted to another "event" at the plant, concurrent to Sunday's scram.

During an attempt to shut down the reactor prior to the biennial refueling and maintenance, the official notice revealed "primary containment air lock failed integrated leak rate test."



**Pilgrim Nuclear Power Station FILE PHOTO**

As for the suggestion that the initial announcement of the leak appeared to be less than forthcoming, Wightman disagrees.

"The 10 CFR50.72 report submitted to the NRC was a voluntary notification that provided immediate and best available information about the discharge pipe," Wightman noted. "Once we complete our review, we will submit our findings to the appropriate agencies."

The NRC's Sheehan backs Wightman — to a point — saying that the inspection of this particular 4-inch diameter cast iron pipe, was supposed to take place in February, as part of a full inspection of all underground piping at the plant, but the work was delayed "due to resource limitations at that time."